***Ethnic disparities in diabetes-related complications amongst an adult inpatient diabetes cohort at Western Health.***

**Background:**

Diabetes-related complications(DM-Cx) are increasingly prevalent globally, disproportionately affecting certain ethnic groups1. We aimed to compare DM-Cx across ethnic groups amongst culturally diverse DM inpatients at Western Health(WH).

**Methods:**

Inpatients aged>18 years with DM between 2013-2022 were identified by ICD-10AM codes. Admission, demographic, mortality, and Charlston Comorbidity Index(CCI) data were extracted electronically. Ethnicity was coded by birth country and grouped using ABS classifications2. Six DM-Cx were extracted from CCI comorbidities. Rates of DM-Cx by ethnic groups and Indigenous status were analysed.

**Results:**

Of 37,561 WH DM inpatients(T2DM 94%), majority were Australian(36.4%), European(34.0%) and Asian(16.5%)-born. First Nations and Pacific Island people were the youngest, but had the highest rates of complicated DM(Table 1). As the oldest cohort, European-born cases had the highest prevalence of cardiovascular, cerebrovascular, and peripheral vascular disease, with mortality 2-fold higher than other groups. Renal disease was greatest in Pacific Island and European-born. Overall, Asian-born DM inpatients had lower rates of DM-Cx than other groups.

**Conclusion:**

First Nations and Pacific Islander people presented with DM at a younger age compared to peers, with higher rates of complicated DM and renal disease. Further analysis is underway to evaluate whether socioeconomic disadvantage underlies ethnic differences in DM-Cx.

**References:**

1Burress LA, Clements JM. Racial and Ethnic Disparities in Type 2 Diabetes Complications and In-Hospital Mortality in the United States: A Retrospective Cohort Study. Diabetology. 2025; 6(3):15. https://doi.org/10.3390/diabetology6030015

2Australian Bureau of Statistics Standard Australian Classification of Countries (SACCC) - <https://www.abs.gov.au/statistics/classifications/standard-australian-classification-countries-sacc/latest-release>

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| **Table 1** | **First Nation, N=347** | **Australian, N=13679** | **Pacific islander\*, N=918** | **Asian, N=6193** | **European, N=12777** | **African+Middle East, N=2299** |
| Age, mean (SD) | 54.35 (15.09) | 62.54 (16.37) | 57.92 (13.09) | 63.15 (14.70) | 73.69 (10.29) | 62.34 (14.92) |
| Mortality, n (%) | 54 (15.6%) | 2534 (18.52%) | 131 (13.97%) | 973 (15.71%) | 3759 (29.42%) | 333 (14.48%) |
| **DM-Cx, n (%)** |
| Acute myocaridal infarction | 43 (12.40%) | 1546 (11.30%) | 116 (12.64%) | 697 (11.25%) | 1741 (13.63%) | 274 (11.92%) |
| Congestive heart failure | 49 (14.10%) | 1828 (13.36%) | 129 (14.05%) | 574 (9.27%) | 2827 (22.13%) | 293 (12.74%) |
| DM complicated | 216 (62.2%) | 7522 (54.99%) | 570 (62.09%) | 2250 (36.33%) | 7345 (57.49%) | 1114 (48.46%) |
| Cerebrovascular  | 17 (4.9%) | 893 (6.53%) | 82 (8.93%) | 404 (6.52%) | 1163 (9.10%) | 144 (6.26%) |
| Peripheral vascular disease | 15 (4.3%) | 554 (4.05%) | 20 (2.18%) | 118 (1.91%) | 658 (5.15%) | 86 (3.74%) |
| Renal disease | 57 (16.4%) | 2138 (15.63%) | 216 (23.53%) | 842 (13.60%) | 2870 (22.46%) | 346 (15.05%) |